- Router to router testing utilizing fielded encryption devices.
- Test tactical networking capabilities to DISN via SATCOM, Land line and Service peculiar systems.
- Operational testing of products/concepts designated for ITSDN Point of Presence gateways worldwide.
- Wholescale system testing by recreating larger networks in a laboratory environment encapsulating the different systems operated by the various DoD agencies.
- Throughput and overload capacity testing of designated networks.
- Hardware and software evaluated against system requirements and customer needs.

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NETWORK INTEGRATION TESTBED (NIT)

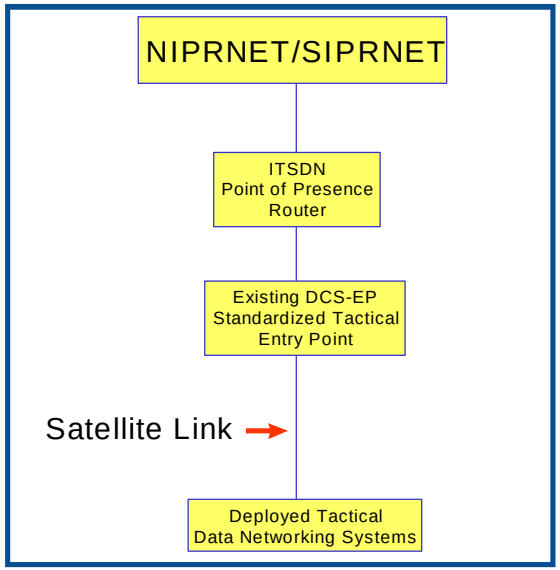
Joint Interoperability Test Command

INTRODUCTION

The Joint Interoperability Test Command (JITC) is the primary test organization for the Defense Information Systems Network (DISN), the Defense Information Infrastructure (DII), and the National Information Infrastructure (NII). The Network Integration Testbed (NIT) conducts interoperability, conformance and certification testing of the Integrated Tactical/Strategic Data Networking (ITSDN) system links to deployed networks in order to complement and amplify the interoperability requirements of the Command, Control, Communications, Computers and Intelligence for the Warrior (C^4IFTW) Concept.

TESTING

The primary function of the Network Integration Testbed is interoperability testing, with emphasis on extending networking capabilities to the tactical forces of the DoD. For this reason, the architecture of the facility has been structured to accommodate the connection of tactical equipment to the broader DII. The NIT is capable of several types of testing and related actions:



- Conformance testing of vendor products.
- Interoperability testing of tactical and commercial networking hardware and software.
- Performance testing of tactical and commercial networking hardware and software.
- Proof of concept testing as it relates to hardware and software performance and interoperability.
- Testing of tactical implementations of commercial networking products.
- Network and network management testing as required by the customer.

TEST PROCEDURES

To perform these functions and other related testing and evaluation requirements for the Defense Information Systems Agency (DISA), the NIT employs several testing methods. A few of those methods are:

- Router to router testing.
  - Evaluate software upgrades against past and current version.
  - Utilize Packet Internet Groper (PING), Standard Internet terminal emulation protocol (Telnet), File Transfer Protocol (FTP), and Remote Logon to test Router interaction.
  - Configure the routers for the various protocols required and measure the results.
  - Verify routing tables. Create complex routing tables and measure the ability to comply.
  - Verify that error messages are interpreted correctly and sessions close/recover properly.
  - Trigger errors, document results and any discrepancies.
  - Test router abilities to act as separate autonomous systems.
- Manufacturer compliance and inter-manufacturer interoperability testing. Interoperability is tested and evaluated between tactical to commercial as well as between commercial to commercial products.